

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended) A current measuring method ~~that involves~~ comprising mounting a current sensor on a board having a conductor for measurement and measuring a current flowing through said conductor for measurement, ~~characterized in that~~ wherein said current sensor is mounted on a surface of said board on the side that is opposite to the side provided with said conductor for measurement, ~~[[that]]~~ said current sensor has a Hall element that detects magnetic fields and magnetic flux concentrating means that causes a magnetic flux to be concentrated in a predetermined direction, and ~~[[that]]~~ said magnetic flux concentrating means is provided in such a manner that a magnetic flux generated by a current flowing through said conductor for measurement is concentrated on a magnetic flux sensing surface of said Hall element.

2. (Currently amended) The current measuring method according to claim 1, ~~characterized in that~~ wherein said current sensor is mounted on a surface of said board on the side that is opposite to the side provided with said conductor for measurement and in a position symmetrical to said conductor for measurement with respect to said board.

3. (Currently amended) The current measuring method according to either claim 1 or claim 2, ~~characterized in that~~ wherein a soft magnetic material is provided on an exterior surface of said conductor for measurement on the side that is opposite to an exterior surface facing the surface of said board.

4. (Currently amended) The current measuring method according to either claim 1 or claim 2, ~~characterized in that~~ wherein a soft magnetic material is provided on an exterior surface of said current sensor on the side that is opposite to an exterior surface facing the surface of said board.

5. (Currently amended) The current measuring method according to either claim 1 or claim 2, ~~characterized in that~~ wherein between said current sensor and said board, there are provided multiple soft magnetic materials so as to be parallel to the direction of a current flowing through said conductor for measurement.

6. (Currently amended) The current measuring method according to ~~any one of claims~~ claim 1 ~~[[to 5]]~~, ~~characterized in that~~ wherein said current sensor integrally incorporates said Hall element and said magnetic flux concentrating means and ~~[[that]]~~ said magnetic flux concentrating means is provided between said Hall element and said facing surface.

7. (Currently amended) The current measuring method according to claim 6, ~~characterized in that~~ wherein said magnetic flux concentrating means comprises multiple magnetic flux concentrating plates and is provided in such a manner that when said current sensor is mounted, surfaces of said magnetic flux concentrating plates are facing the surface of said board.

8. (Currently amended) The current measuring method according to claim 7, ~~characterized in that~~ wherein said multiple magnetic flux concentrating plates are spaced in such a manner that when said current sensor is mounted, surfaces of said magnetic flux concentrating plates are opposite to the surface of said board and said multiple magnetic flux concentrating plates are positioned on both sides of a

centerline of said conductor for measurement as viewed from the direction perpendicular to the plane of said board.

9. (Currently amended) The current measuring method according to ~~any one of claims claim 1~~ claim 1 ~~[[to 8]]~~, characterized in that wherein said conductor for measurement is a printed wiring and ~~[[that]]~~ said board is a printed board.

10. (Currently amended) A current measuring device, ~~characterized in that the device comprises~~ comprising a board having a conductor for measurement and a current sensor ~~[[to be]]~~ mounted on the surface of said board, ~~[[and]]~~ that measures a current flowing through said conductor for measurement, ~~[[that]]~~ wherein said current sensor is mounted on the surface of said board on the side that is opposite to the side provided with said conductor for measurement, ~~[[that]]~~ said current sensor has a Hall element that detects magnetic fields and magnetic flux concentrating means that concentrates a magnetic flux in a predetermined direction, and ~~[[that]]~~ said magnetic flux concentrating means is provided in such a manner that a magnetic flux generated by a current flowing through said conductor for measurement is concentrated on a magnetic flux sensing surface of said Hall element.

11. (Currently amended) The current measuring device according to claim 10, ~~characterized in that~~ wherein said current sensor is mounted on the surface of said board on the side that is opposite to the side provided with said conductor for measurement and in a position symmetrical to said conductor for measurement with respect to said board.

12. (Currently amended) The current measuring device according to either claim 10 or claim 11, ~~characterized in that~~ wherein a soft magnetic material is

provided on an exterior surface of said conductor for measurement on the side that is opposite to the side of an exterior surface facing the surface of said board.

13. (Currently amended) The current measuring device according to either claim 10 or claim 11, ~~characterized in that~~ wherein a soft magnetic material is provided on an exterior surface of said current sensor on the side that is opposite to an exterior surface facing the surface of said board.

14. (Currently amended) The current measuring device according to either claim 10 or claim 11, ~~characterized in that~~ wherein between said current sensor and said board, there are provided multiple soft magnetic materials so as to be parallel to the direction of a current flowing through said conductor for measurement.

15. (Currently amended) The current measuring device according to either claim 10 or claim 11, ~~characterized in that~~ wherein said current sensor integrally incorporates said Hall element and said magnetic flux concentrating means and ~~[[that]]~~ said magnetic flux concentrating means is provided between said Hall element and said facing surface.

16. (Currently amended) The current measuring device according to claim 15, ~~characterized in that~~ wherein said magnetic flux concentrating means comprises multiple magnetic flux concentrating plates and is provided in such a manner that when said current sensor is mounted, surfaces of said magnetic flux concentrating plates are facing the surface of said board.

17. (Currently amended) The current measuring device according to claim 16, ~~characterized in that~~ wherein said multiple magnetic flux concentrating plates are spaced in such a manner that when said current sensor is mounted, surfaces of

said magnetic flux concentrating plates are opposite to the surface of said board and said multiple magnetic flux concentrating plates are positioned on both sides of a centerline of said conductor for measurement as viewed from the direction perpendicular to the plane of said board.

18. (Currently amended) The current measuring device according to ~~any one of claims~~ claim 10 ~~[[to 17]]~~, ~~characterized in that~~ wherein said board has multiple conductors to be measured and ~~[[that]]~~ said current sensor is mounted in a position where the distance of said board from each of said conductors to be measured is in a predetermined relation.

19. (Currently amended) The current measuring device according to ~~any one of claims~~ claim 10 ~~[[to 18]]~~, ~~characterized in that~~ wherein said conductor for measurement is a printed wiring and ~~[[that]]~~ said board is a printed board.

20. (Currently amended) The current measuring device according to ~~any one of claims~~ claim 10 ~~[[to 19]]~~, ~~characterized in that~~ wherein a magnetic flux sensing part of said Hall element is formed from Si, GaAs, InAs or InSb.